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City Planning

By

Frank G. Bates

**Associate Professor of Political Science
Indiana University**

**Indiana
Bureau of Legislative Information
Bulletin No. 8**

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INTRODUCTORY NOTE.

The purpose of this bulletin is to place before the reader in brief compass the meaning and scope of city planning and a few of the more important topics arising in connection with the subject. Obviously the treatment is incomplete and can do little more than give suggestions on lines along which further reading might be pursued. This bulletin makes no claims to originality. Works noted in the bibliography have been freely drawn upon and particularly Nolen's City Planning and Shurtleff's Carrying Out the City Plan, to the authors of which acknowledgment is here made.

JOHN A. LAPP, Director.

CITY PLANNING.

City planning is the science of designing cities or parts of cities so as to make them more convenient, healthful, efficient and beautiful or, as it has been expressed, “The attempt to exert a well-considered control on behalf of the people of a city over the development of their physical environment as a whole.”¹

The separate elements which enter into city planning have attracted attention for years but it is only comparatively recently that they have been brought together so as to be thought of as parts of a larger whole. It is an appeal not only to a longer foresight, but to a broader vision and a wider realization of the interdependence of the factors which go to make up not only the physical but the moral and intellectual welfare of the city.

Frederick Law Olmsted has said: “Whether they like it or not, whether they know it or not, a collective responsibility rests upon citizens of the present generation for making or marring their city’s future in countless ways. It is utterly beyond their power, or that of their agents, to discharge that responsibility with complete knowledge or infallible wisdom; but it is reasonable that they should use a moderate amount of their collective energy and wealth in a deliberate and conscientious effort to meet the responsibility as well as the available means permit.”²

The subject of city planning is so large and offers opportunity for such flights of imagination that much self restraint is called for, yet the consequences of neglect and the rewards of carefully planned work are so large that it is worthy of the highest civic effort. As understood today the subject includes

¹Nolen’s City Planning, p. 1.

²Nolen’s City Planning, p. 3.

communication, transportation, water supply, sanitation, public buildings, public aesthetics, recreation, housing, the regulation of private property in the public interest and the financial arrangements made necessary by these things. These may be grouped for convenience into problems relating to: 1, circulation; 2, public buildings and grounds; and 3, private property. The realization of the ideas of city planning call for, as successive steps: a survey of conditions, the framing of a plan, creating the machinery of administration, and the execution of the plan.

Evidence proves that in early times some parts of the great cities were planned with a view to their convenience and beauty, but it is in general true that cities have grown up without any previous planning and to a great extent without large plans of orderly development. Two conspicuous instances of deliberate planning of a great city in advance suggest themselves: Washington, which has in part at least been developed in accordance with the original design and Canberra, the new capital of Australia, as yet in its earlier formative state. Only in rare instances have great cities begun large undertakings of replanning which involve at one time radical changes in the street plan or the abandonment of existing public buildings in order that broad avenues, civic centers and imposing public buildings might appear. The enormous cost, the inertia of public sentiment and the opposition of vested interests have prevented. London missed its great opportunity when, after the great fire, vested interests prevented the rebuilding according to Wrenn's plans. Likewise, America has seen similar opportunities lost in Boston, Chicago, San Francisco and Baltimore. Paris and Vienna present the two notable examples of replanning on an elaborate scale.

As a practical problem today city planning presents two aspects:

First: In the older parts of cities it is a matter of replanning through the opening of new streets or the widening of

old ones to relieve congestion; the cleaning up of a slum; the creating of parks and breathing spaces in crowded neighborhoods; or determining and preparing the site for a public building. Such projects involve the expenditure of vast sums—the penalty paid for lack of foresight in the past—and in their turn are usually carried out singly and without the look ahead to future building. Millions are being spent in our older cities as tribute to lack of planning. New York City has spent in a generation not less than four hundred million dollars in correcting mistakes.

Second: In the outlying districts there is going on real work of planning streets and improvements. Here is the opportunity for a harmonious and considered development which, though too often neglected, may be produced by cooperation between authorities and the intelligent self-interest of proprietors.

It is but a short time since the term city planning gained currency. It has, too often, meant nothing more than the “city beautiful” and seemed to concern itself with the planning and adornment of a few show places of the city. The jealous regard for individual rights and vested property interests in this country have made unpopular the imposition of sanitary requirements, limitations on height and area of buildings and insistence on the aesthetic rights of the public, while improvements at public expense have been popular which touch no private interest and satisfy the desire for mere external adornment. Today city planning is taking on the wider and deeper meaning expressed in the definitions set forth above.

It is now in order to consider the several elements included in a city plan.

Circulation.

The circulatory system of the city includes the streets, railway and terminal facilities and transportation and transmission agencies within the city.

Street Plan.

The street system forms the basis or framework of the city plan upon which the whole system of transportation and communication depends, the water and sewer systems are planned with reference to the street system, and the location of smaller parks and public buildings are closely related thereto, and the layout of building lots and the use thereof are determined by the adjacent streets. The older cities and especially those on the Atlantic coast, with few exceptions, grew up without a thought of street plan, though notable exceptions are found in Washington, Philadelphia and Baltimore. Farther west, town-sites have commonly been laid out in advance of settlement and with monotonous regularity. Conscious street planning has been chiefly restricted to the development of suburban areas or the replanning of congested districts.

Two chief types of street plan are in use in America, the rectangular and the radial. To these may be added what might be called the "natural" and the concentric, the latter common in Europe, but rare in this country. The rectangular plan was early given expression by William Penn in Philadelphia and in later times it has recommended itself where cities were laid out in a level country in advance of settlement, and particularly because it adapts itself perfectly to the rectangular land survey. For this arrangement which has become the dominant one in this country, it may be urged that it is simple and easily learned by the stranger and is economical of building space. On the other hand it is objected that this arrangement is monotonous; it entails the traveling of two sides of a right triangle to reach almost any given point; it does not offer civic centers and commanding sites for public buildings; it fails to take into consideration natural physical features and its long straight streets offer a maximum of opportunity for sweeping winds and whirling dust.

The radial plan is less artificial in origin, and conforms more nearly to natural lines of communication. It is especially

adapted to use in cities having a water front where travel converges upon a principal landing place or bridge, and demands a broad open space at the focal point. Examples are to be seen in Providence, Buffalo and Detroit and to a certain extent in the central part of Indianapolis. The plan is commonly combined with a somewhat regular rectangular arrangement of minor and cross streets such as seen in Detroit.

In Indianapolis the original mile square was provided with four radial streets converging toward a civic center at Monument Place. Unfortunately the full benefit of the plan was lost by the failure to prolong the radials through to Monument Place. The result is that converging streams of traffic are poured into four rectilinear streets of width quite insufficient to carry it. Monument Place itself becomes an eddy rather than a civic center. Furthermore the radial idea was not persisted in in later additions. The classic and elaborate example is Washington, where, upon a rectangular scheme was superimposed diagonally a second network of broad avenues. This creates at intervals broad circles from which radiate streets and avenues. The radial system has been used effectively in replanning work in European cities, particularly in Paris. The same idea has been employed in certain older American cities to open up new arteries in congested districts. By the use of the radial plan and a judicious adaptation of street widths the centers of business are firmly fixed and the shifting of business from one location to another, so fatal to property values, is effectively checked. The chief objection to the system is that it is extravagant of land, and forms lots of odd shapes at intersections. This is compensated for, however, by promoting convenient open spaces where most needed, and by lending itself to more beautiful architectural and landscape treatment.

The “natural” plan follows the thought that a natural and unconscious development is never regular, but accommodates itself to the contour of the site. This arrangement reveals itself in water-side cities where streets follow the wind-

ing shores as in Boston or New Orleans, or the curving hillside as in Cincinnati. Its conscious adoption is confined to residential districts where much more effective use is made of it than is possible with the common rectangular arrangement.

The concentric arrangement, usually found superimposed on a radial plan, has developed in Europe by making streets in the spaces formerly occupied by concentric walls of defense, but few examples are to be found in America.

Terminal Facilities.

The importance of providing ample terminals for steam and electric railroads has, naturally, been appreciated in each city only at a date when the work has become difficult and expensive. But, though expensive, it is vitally necessary to progress. Terminal congestion is fatal. It is estimated that from ten to thirteen per cent is added to food costs in New York City by her inadequate terminal facilities. New Orleans, by constructing an adequate terminal system, reduced switching charges from thirteen dollars to two dollars. Convenient and widely distributed freight stations, belt lines and a union passenger terminal convenient to the business center and large enough to accommodate all future demands are essential to business development. The planning of railroad entrances and terminals must likewise consider the future, if not the present, elimination of grade crossings. City planning has not yet successfully provided a direct and rapid entrance to the city for electric interurban and suburban railways, though the planner of the future must find a solution of the problem.

Street Traffic.

The street traffic problem is mainly one of street plan, but the street car problem is one of routing. Just as it is desirable that there should be ample radial streets to bring street car traffic toward the center, so is it undesirable that the cars reach a common transfer point, for, although a

convenient arrangement in a small city, as the population grows this brings intolerable congestion. To avoid this, car lines loop before reaching the center or become through lines passing near the center through side streets. Under these arrangements transfers are effected by a central transfer belt line. The lack of proper cross-town routes is a common weakness of city transportation systems.

Besides streets and railways, the circulatory system of the city includes its water and drainage systems and its system of communication by wire, viz: telephone, telegraph, fire alarm and electricity.

Water System.

The city plan is sadly defective which does not contemplate the securing of a supply of good water ample not only for needs of the present, but for those of a long time to come. In view of the constantly increasing use of water for domestic, manufacturing and public services it is not wise to estimate probable use at less than 150 gallons daily per capita. Original cost should not deter the city from going far afield in search of an ample and pure source at the beginning. It is a common experience that sources once deemed sufficient and pure have become insufficient in quantity, or impure from growth of surrounding population, imposing the necessity of loss through abandoned plants, and the expense of new installations. In order properly to safeguard the quality of water the whole water shed should be controlled. Such areas may also serve admirably the purpose of city parks and forests.

Likewise in the installation of mains and distributing systems, a prime consideration is to allow sufficient margin for growth; particularly in streets which may become main arteries of communication with future additions, such future demands should be anticipated and provided for.

Drainage System.

The drainage system including both sanitary and storm sewers is part of the circulatory system in which lack of wise

foresight and a penny-wise policy has entailed a heavy cost in both lives and money. Aside from the question of good installation from the technical point of view it is, like water supply, to a greater extent a question of anticipating future needs.

Sewage Disposal.

The planner of the city must keep in mind facilities for treatment of sewage in a proper disposal plant so as to avoid the shiftless and insanitary practice of emptying its waste into a stream to befoul the banks for miles below. Here again an important consideration is to make ample provision for future demands on the system.

Wires.

With respect to the various systems of wires the prime consideration is to avoid the encroachment of poles and wires on the street and the early placing of wires underground. It is a measure of far sighted economy to provide, at least as early as pavements are laid, underground conduits which shall accommodate all fixtures and wires thereby avoiding repeated openings in the roadway. In some cases it has been found desirable to place such conduits beneath the sidewalk.

Public Buildings.

The second group of problems is that connected with public buildings and grounds including parks, squares and recreation grounds. The city planner is not primarily concerned with the architecture of individual public buildings beyond the point that they should possess dignity, be suitable to their purpose and in harmony with their surroundings. It should be observed, however, that few cities in America have learned that structures for the most commonplace utilitarian purposes, such as market houses and power stations, may be made architectural assets rather than monuments of ugliness. With respect to location, public buildings may be grouped in three classes, first, those which serve the whole city and hence should

be centrally located and easy of access; second, those which serve only a section of the city and should be located with reference to that neighborhood, and, third, those which serve the whole city, but in such a manner that location and accessibility are not prime considerations.

Among the buildings of the first class are the city hall, court house, post office and central market. Accessibility is here important and if the building is such as to be an architectural ornament it should have a commanding position. Such buildings may be massed about a civic center or scattered about. They should not only stand in an open space but in a position so that they may be seen when approaching along a radiating street. The city of rectangular plan loses the opportunity for such effects since buildings can only be seen when close at hand. The Monument at Indianapolis owes its commanding character to its appearance when viewed, not from the circle at its foot but from a distance along the streets at whose intersection it stands. The State House is impressive only when seen from along Market street and not at all from the streets bounding the capitol square.

The second class of buildings, including police stations, fire stations and schools should first of all be convenient to their neighborhood and yet by a judicious adaptation of style to the architecture of the neighborhood they may become ornaments to the locality. The third class of buildings, hospitals, libraries, museums, may be made to contribute to the beauty of a city and particularly since they frequently are set in large areas of improved grounds. Even the garbage incinerator and the city store house need not be planned and located on utilitarian principles alone.

Public Grounds.

Public grounds fall into two distinct classes; first those located outside the thickly settled areas or perhaps outside the limits of the city; and, second, those within the built up portion of the city.

It is a fortunate city whose citizens perceive early and before it is too late, the value of securing one or more large tracts of land in its natural state and possessing some natural beauty to be held as a city forest, park or playground. Often the need of these is not foreseen until encroachments have been made or the cost of acquisition has become excessive. Such areas are common in European cities, and are owned by a few of our own older cities, but too few of the newer ones have made such provision. The second class includes the grounds about sites of public buildings, small parks or squares and public playgrounds. The first two serve purposes both of ornamentation, and as breathing places. A radial street plan lends itself especially to the formation of small parks at irregular intersections of streets. Public playgrounds have become such a well recognized factor in the social well being of city neighborhoods that no plan can now afford to ignore them.

Condemnation

Thus far we have discussed the elements of city planning in which the proprietorship of the property involved is in the city or in owners who are so fully in accord with the public purpose as to work harmoniously with the authorities. Unfortunately it often happens in a large undertaking, that, on account of selfish considerations or differences in judgment, a working agreement can not be reached. It then becomes necessary, if the improvement is to be accomplished, that the city take property under the right of eminent domain through "condemnation" proceedings.

In the United States rights of owners are secured by the constitutional provision that property shall be taken only for public use and upon just compensation and in other countries substantially the same rights are protected by other devices. A notable difference of opinion has developed in the different countries as to what constitutes a "public use" and what constitutes a "taking". In the United States a highly indi-

vidual conception of property has resulted in a conception of those terms which is much less favorable to the public than elsewhere. This conception varies even in America, with time and place, growing broader with the broadening conception of the proper scope of government.

Under the right of eminent domain the state may take any property providing the taking be for a purpose which at the time of taking is held to be a proper function of government. In carrying out a city plan, some of the purposes for which private property may be taken are streets, water works, sewers and disposal plants, pipe lines, parks, playgrounds, and sites for public buildings.

The city may, since these have been held proper governmental functions, build a waterworks and sell water or may produce and sell gas, but it may not take land on which to build workingmen's dwellings for rent since this is not a recognized public use.

It may be in some cases that the public does not actually take full possession, but only such rights as serve a public purpose, leaving the rest with the owner, yet this constitutes "taking" of property. Such are the rights taken to lay pipes under or to suspend wires above private land. In the case of land taken for streets, practice varies. In some places the land is condemned outright, title passing to the city while elsewhere only the use for street purposes is taken with title remaining in the former owner. In the latter instance the owner may use the property for any purpose not inconsistent with the public use.

Even though the city neither takes title nor puts the land to any real use but leaves the property in possession of the owner, merely forbidding him from using it for certain purposes, such restriction is a "taking". An example is the Indiana law applying to Indianapolis (Laws of 1909, Chap. 89, Sec. 7) by which a building line may be established on land facing a parkway or boulevard by condemnation.

In these and all cases of taking, whether of an easement or an absolute acquiring of title, the former owner must receive just- compensation. The rights of private owners are so carefully protected in the United States that the steps in condemnation proceedings are sometimes both tedious and difficult. Aside from the opportunity for appeal to a higher court, which is not frequent, the initial proceedings are slow. In the states where a common law jury is required under the constitution, the way is opened for provoking delay, though in Chicago and Cleveland notably, jury awards have been both prompt and fair. In a number of states juries are dispensed with. In Indianapolis (Laws 1911, p. 580) the board of public works and the park board at one hearing dispose of the objections to the taking, the award of damages and the fixing of the size of the benefited area. Appeal lies to the circuit or superior court sitting without jury, and their judgment is final. The method has proved so prompt and the awards so satisfactory that it has been widely advocated for adoption in other states.

Excess Condemnation

There are certain conditions under which it becomes desirable to take from the private owner more land than is to be used in a contemplated improvement. But since such excess taking of land is not actually for use in the public improvement it is held by the courts not to be for a "public use" and consequently it cannot, under the usual constitutional guarantees of property, be accomplished under the right of eminent domain. Such taking, when made legally possible, is termed "excess condemnation."

Excess condemnation is most often desired when a new street is cut or an old one widened through a densely built, but low grade district, or when a boulevard or parkway is to be built in an undeveloped area. The results sought are:

First: A consequence of the improvement will be a rise in values of adjacent land. It is urged by many that if the

public could take the land at its previous market value and, after the improvement, sell at the enhanced value the difference would assist in meeting the cost of the improvement. When the land is resold to its former owners the result is that of a special assessment. Such excess condemnation is, however, not generally sanctioned by the courts. Under existing law the city, when taking land for such a purpose, by taking a part of the property, enhances the value of the remainder and then pays damages for the privilege of so enhancing the value.

Second: In cutting or widening a street there may be small remnants left in the owner's hands too small for separate use and which the owner may hold unimproved to force purchase by adjoining owners at an unreasonable price. Such remnants present unsightly appearance and may impair both the value of the improvement and of the adjacent property. If taken by the public they may be disposed of to be merged in adjacent holdings. Takings for such a purpose the courts seem in a very guarded way to uphold.

Third: If the land adjacent to a boulevard or parkway could be taken and resold with building restrictions one purpose for which the improvement was made would be assisted by ensuring structures on the resold land which would not detract from the general value of the improvement. Such takings seem not likely to meet with favor in our courts.

The practice of excess condemnation was begun in this country by a Massachusetts statute in 1904, and since that date statutes have been enacted in Ohio, Maryland, Virginia, Connecticut and Pennsylvania. The Massachusetts act is directed toward the taking of unsalable remnants, while the Connecticut act is unlimited as to the amount to be taken. The other acts limit the purpose of taking to the protection of parks, boulevards and public buildings. To obviate constitutional objections amendments permitting taking by excess condemnation have been adopted in Massachusetts, New York, Wisconsin, Ohio and Rhode Island. Whether these amendments

are in violation of the "due process" clause of the fourteenth amendment to the Federal constitution is yet to be determined by the United States Supreme Court.

The conclusions with respect to excess condemnation reached by students of the problem are:

First: That where the primary purpose is to reimburse the city for the cost of an improvement the plan would not stand under the Federal constitution.

Second: The testimony of European observers, though contradictory, has led many to believe that even if constitutional, a more advantageous and remunerative method of distributing cost would be to employ the method of special assessment to its limit.

Third: That when the prime object is to control the character of the street by taking remnants or by controlling adjacent building sites, then the practice seems desirable of adoption.

Regulation of Private Property.

So far we have considered improvements which relate primarily to property belonging to the public or in which the public has acquired a use either by purchase or by the right of eminent domain. We must next consider the relation of city planning to property remaining in private hands, and to its regulation. When the city planner approaches the regulation of private property and especially regulations through the police power he enters upon a thorny path. The elaborate safeguards of property rights serve as limitations on every hand as has been already seen to be true in cases of condemnation.

Each individual in the state is endowed with certain individual *civil rights* both of person and property. To secure the uninterrupted enjoyment of these he has at his command under constitutional guarantee the whole resources of the state. There are, however, two limitations upon the free enjoyment of these rights:

First: That they shall not be used to the infringement of the rights of another individual.

To enforce this limitation the injured party has recourse to the courts by appropriate action.

Second: That such rights shall not be used to the detriment of the public in its safety, health, morals or general well-being.

To enforce this limitation in the public interest restraint or compulsion is exercised through the police power.

As has been indicated in connection with public "takings," what may constitute a proper occasion for the exercise of the police power varies with the current conception of the proper function of government. In America the extension of the police power to new subjects is relatively slow and the presumption is against such extension. For example it has long been accepted doctrine that an owner may be restrained from maintaining a soap factory near a public thoroughfare as offensive to the sense of smell, but an owner may not be restrained from maintaining an ugly billboard as an offense against the sense of sight.

The range of matters regulated under the police power is very wide but herein it is necessary only to touch upon those which clearly affect the carrying out of a city plan. These fall chiefly under two heads:

First: Limitations upon the intensive use of lands; and

Second: Limitations on the offensive use of lands.

Height of Buildings.

Limitations on the intensive use of land take the form of restrictions upon the height and size of buildings. The building codes of many cities limit the height of buildings. The limit for business structures, which is usually an absolute height, ranges from 120 ft. in Providence, to 200 ft. in Chicago, Cleveland and Newark. Perhaps 125 ft. may be said to be the prevailing limit. In some instances the height permitted

is made proportional to the width of the street, two and one-half times the street width being a usual limit. In the larger European cities height limit varies from 60 ft. to 80 ft. The height limits are in all cases in America, with the possible exception of a few of the largest cities, so great that at present they constitute no real limitation. These limitations have been sustained by the courts as proper exercises of the police power in the interests of safety from fire and the preservation of health. Another regulation in the interest of safety is the limitation of wooden buildings used for dwellings to two stories, which has been adopted in several cities to check the ugly and dangerous wooden "three deckers".

Area Limitations.

Regulation of the size of buildings in proportion to the area of the lot though justifiable on grounds of both safety and health are less frequent and are apparently less willingly approved by courts. Not more than two-thirds of the cities of over 100,000 inhabitants have any such restrictions whatever.

Regulations apply ordinarily to tenement and apartment houses only. The limit for such buildings not located on a corner being from 60 to 80 per cent of the total lot area. Baltimore requires a space of at least 20 ft. between a frame structure and any other structure.

Area limitations, wherever they exist, consist of restricting the structures thereon to a certain percentage of the lot area or of specific stipulations as to area of yards and courts which are made to vary with the height and character of the structure. The Indiana housing act (Laws of 1915, Chap. 149) applies to tenement houses, i. e., houses occupied by two or more families enjoying some of the appurtenances thereto in common, and limits their height to one and one-half times the street width. No such house may, if on an interior lot, occupy more than 65 per cent thereof; if on a corner lot more than 85 per cent thereof, and if on a lot bounded by a street on three sides, more than 90 per cent thereof. Rear and

side yards and courts are made to vary according to size of lot and height of the structure. A defect in the law is that it does not apply similar or appropriate regulations to every structure used as a dwelling by one or more families.

Offensive Uses.

The second class of matters to be regulated through the police power is the use of lands for purposes which are offensive to the public. Any use of land which from its very nature is known to be offensive and detrimental to the safety, health, morals or general well being of the community is a nuisance and as such may be abated. Slaughter houses, rendering plants, stables, smelters, and the emission of dense smoke are among the things generally recognized as nuisances. There are also certain other uses not inherently nuisances which may on account of surrounding conditions become harmful to the community, and hence may be restrained in such neighborhood entirely or controlled sufficiently to render them innocuous. It is a fact that a very large number of industries legitimate in themselves become, when carried on in a residential neighborhood, harmful to the safety and health of the population and may depreciate property values materially. Such industries may even be detrimental to the public in commercial districts. In like manner the invasion of a residential locality by business structures may prove harmful to persons and property. Such conditions call for the exercise of the police power.

Zoning.

Upon reviewing the objections which may be urged by the city planner to the intensive and offensive uses of private property it will be seen that these objections do not hold equally throughout the city. Every city of any considerable size contains a certain number of fairly well marked districts. There is a business district, one or more industrial districts and residential districts. In larger cities districts might be further differentiated. That which is detrimental in one dis-

trict may be positively beneficial and necessary in another. This fact has led, in certain cities, to the official recognition of the dominant use characteristic of localities by dividing the city into districts and applying to each different regulations with respect to intensive and offensive uses of property. The principle has long been recognized in America in the establishing of "fire limits" in down-town districts wherein, to reduce the fire hazard, the building regulations have been made more stringent. Borrowing from Germany where the practice is more fully developed, this device is called "zoning". Zoning has been applied in this country with respect to the height and area of buildings and with respect to dominant use characteristic of the neighborhood whether commercial, industrial or residential.

Five cities, Boston, Washington, Baltimore, Indianapolis and New York offer examples of height of building districts. In Boston the whole city has been divided into business and residential districts and a limitation of height prescribed for each. In Washington certain are residential and others business streets. In both Baltimore and Indianapolis there is a special district created surrounding one central monument. In Indianapolis a limit of 86 feet is placed upon buildings upon Monument Place. There has since been placed an absolute limit of 200 feet in all parts of the city. Zone restrictions of area of buildings occur in America only in Richmond, Va., where the city council may fix building lines on certain streets, and in New York City. In Massachusetts cities may generally regulate the location and use of buildings for the promotion of safety, health and morals. In certain classes of cities in New York, Minnesota, Wisconsin and Ontario, and in Baltimore, Seattle and Los Angeles districting or "zoning" has been introduced. In some instances, as in second class cities in New York, it consists in the delimitation of residential districts within which only dwellings of one and two stories may be built. In Minnesota, residential and industrial districts may be established with separate districts for different classes

of industries. In Los Angeles there are twenty-five "industrial districts" where both industries and residences are permitted; "residence exceptions" including isolated tracts of one or two blocks within the residential district where certain kinds of business may be carried on under certain conditions, and one general "residential" district where specified industries may not intrude.

The application of the principle of zoning to districts with respect to use has usually taken the form the segregation of certain "residential" districts where business and industry may not intrude. By ordinance adopted in July, 1916, New York City applies the zone system more extensively than has heretofore been done in America. "Height districts," "area districts" and "use districts" are created. In the height districts height is based on street width, the maximum in the several districts being one, one and a half, two and two and a half times the street width with exceptions for set-backs, spires and chimneys. In the area districts, of which there are five classes, area is made proportional to height of building in varying ratio with special provisions for courts and rear yards. With respect to uses of property the city is divided into three classes of districts, residential, business and unrestricted. In the residence districts only a few uses except for dwellings are permitted, viz: schools, churches, hospitals, libraries, passenger stations and gardening. In the business district are prohibited a long list of industries which are likely to become offensive. The unrestricted districts correspond to the industrial districts of other cities.

A third method of control of private property is through the control over the street plan. It is necessary to the success of a real estate development that the city accept a donation of the streets of the addition. In the absence of a right in the public to regulate more directly, a control may be exercised through stipulations laid down as conditions precedent to acceptance of the streets by the city. Probably the most care-

fully developed requirements for this purpose to be found are those worked out by the city planning commission of Cleveland in conjunction with the realty board of that city.

Another and more indirect method of control of private property is through the tax system. By taxing land more heavily than improvements the holding of unimproved land may be checked and compact building encouraged; by taxing various classes of property, where classification is permitted, the kind of improvements made may be affected, and, by exemptions from taxation for limited terms, desired improvements, such as factories, may be encouraged.

Private Co-operation.

After all practicable restrictions have been applied to the uses of private property through the exercise of public authority there remain many matters of interest to city planners which are beyond the reach of public control, or in regard to which public control can be exercised only partially and indirectly. The chief responsibility for progress in this direction has rested and will for the immediate future continue to rest upon private owners. It will be for them to decide whether development shall be conducive to the largest general good or be guided by selfish considerations. The attitude of the public toward private ownership and its public obligations has so far shifted in recent years that the old indifference of owners of property no longer passes unchallenged. A hopeful sign is that the more progressive organizations of real estate dealers, particularly those interested in the development of new property, are coming to appreciate their social responsibilities and to see that consideration for social ends is necessary to the high development of their profession. Much is being done by these organizations to awaken a higher civic spirit not only in the rank and file of their calling, but among the public.

Of the many points at which the action of private owners, quite beyond the law, may aid or mar harmonious development but one will here be dealt with.

Subdivisions.

The development of new tracts or "additions" whether technically within or without the city limits offers the greatest opportunity for constructive city planning. It must be borne in mind that the main purpose of subdivision by the owner is financial gain. It cannot be otherwise. It is one purpose of the city planner to show the owner that by intelligent development he may, without financial loss, confer a blessing upon the future occupant and upon the public.

Beyond the point to which he may be pursued by the law he must be reached by education.

A few facts may here be set down as suggestions in harmony with good city planning, which should be brought to the attention of the promoter of subdivisions. The street plan, while avoiding the gridiron system, should articulate with that of existing streets. The irregular plan with curving streets lends itself to more picturesque landscape effects, and forms a better setting for the individual dwellings. Though the irregular plan is less economical of land this may be compensated for by a more rational variation of street widths. After providing certain main thoroughfares to take the bulk of the traffic minor streets may be reduced from the ordinary thirty foot streets to twenty-four feet, thereby securing a desirable privacy for the homes and gaining building area and saving from three to four thousand dollars a mile in street costs. Sidewalk widths on such streets may well be reduced to four feet instead of five with a saving of at least \$1,500 a mile. Where the rectangular plan is adhered to a lot of more than 100 feet depth is an extravagance, which with the rise of land values will encourage alley dwelling houses. In fact it is now held by the best authorities that alleys are undesirable altogether. It is now shown that with the improvements put in and charged upon the price of the lots, problems vexing to the future owner will be avoided, the value of the lots enhanced by more than the cost of improvement, and sales will

be more rapid. Open spaces for parks and playgrounds are effective in adding to lot values. For even a moderate grade of building development the value to the subdivider is enhanced by restrictions covering building line, cost of structure and business structures which serve to predetermine the character of the neighborhood.

FINANCING CITY PLANNING.

Along with the undertaking of any project of planning or replanning comes the question of financing the improvement. Those aspects which relate to the control of property to be retained in private hands or which may come to the city in the form of donations raise no serious financial problems, but projects involving the exercise of the right of eminent domain, the purchase of land and the construction of great public works, buildings and monuments usually involve extraordinary expenditures. These improvements cannot be paid from current revenues since they would impose too great a burden of taxation and since the expense of their creation may well be shared by those who shall enjoy them in the future. The apparent fact that had reasonable foresight been exercised in the past much of the burden of replanning would have been unnecessary ought to teach communities the importance of acquiring lands for future improvements while they may yet be had at a mere fraction of their future value. Foresight is, however, seldom characteristic of a municipality. A realization of what might have been saved by a forward look over the period of a single generation of some of our older cities is startling.

Since the tax rate is inelastic, to finance large improvements the city must have recourse to borrowing, distributing the payment over a period of years. Borrowing finds its limit in the constitutional limitation on the borrowing power. This limit, which is 2 per cent. in Indiana, varies from 2 to 10 per cent. in different states.

In this contingency various methods have been devised for securing the needed funds.

First: The constitutional limitation may be removed or raised by amendment. This is usually difficult to accomplish, especially if the pressing need is felt only in a few cities.

Second: A constitutional provision which may perhaps be more easily secured is that whereby debts contracted in the establishing of a self-sustaining utility are not to be considered a part of the municipal indebtedness since they impose no new burden upon the taxpayer. This is now provided within certain limits by the constitutions of New York and Pennsylvania.

Failing these, certain devices for securing funds without exceeding the debt limit have been discovered.

Third: Other public corporations may assume the indebtedness. In cases where the boundaries of a township or county are substantially coterminous with the city the cost of certain kinds of improvements may properly be assumed by such corporation, thus adding nothing to the municipal debt. This method has been employed for example by Milwaukee. In Indiana, under the extremely low limit of 2 per cent. the practice has become established of creating a separate corporation, the school city, coterminous with the civil city, for the purpose of holding and administering school funds and property and of assuming debts contracted, thereby doubling the debt incurring power of the community on that account. Since this device has not been pronounced a violation of the spirit of the constitutional restriction, there seems no reason why by similar device the legislature might not go on increasing the debt contracting power by authorizing the creation of a sewer city, a water city, or, indeed, a park city.

Fourth: A device which has gained both legislative and judicial sanction in Wisconsin and Minnesota and is, per-

haps, in use elsewhere, is the purchase of land on contract, payments to be made in installments. Possession of the property is in the city, but the title remains in the seller until payment is complete.

Fifth: By substantially the same method, in the case of a public utility a private company may be formed for the express purpose of constructing or holding the property, the city contracting to pay in installments and to take over the property upon amortization of the cost with interest. This method has been employed in certain Indiana cities. It has the disadvantage that a higher rate of interest is paid than would be true if the city could borrow directly and furthermore that the investment is not tax-free.

Sixth: Allusion has already been made to the possibility of employing excess condemnation as a means of recoupment for improvement costs. The testimony of observers in London, Paris and Brussels would indicate that, except perhaps in undeveloped districts, reliance upon this as a means of financial relief would prove disappointing. In Paris it is said that not more than twenty-five per cent. of the cost has been recovered by the sale of land taken, and that, usually, after waiting from eight to ten years for a rise in value. In London, of fifty-seven streets, on but seven did the percentage of cost recouped exceed thirty-five per cent. and on most it fell below twenty per cent. One is led, then, to the conclusion that excess condemnation finds its justification on other than financial grounds.

Seventh: It is true with respect to many classes of improvements that they confer a special benefit upon some neighboring property which can be distinguished from the general benefit conferred upon all. In such cases the method of "special assessments" is employed to pay the whole or a part of the cost. The special assessment is a contribution paid once for all to defray the cost of a special improvement to property undertaken in the public interest and repaid to

the government in proportion to the special benefit accruing to the property named.

A special assessment differs from a tax in that it is for benefit to property and hence cannot exceed the value of the real benefit conferred, and that it need not be uniform on all property. A common use of this form of payment is in connection with street and sewer improvements. It has been employed extensively in New York City and elsewhere in the construction of parks. It is used in Indiana not only for street and sewer improvements but in the construction of boulevards and the planting of trees on streets. The problem of a just apportionment of the assessment is variously solved. The cost is usually divided, the specially benefited area paying a part and the whole city paying the remainder. In some instances varying degrees of special benefit are recognized in proportion as the property is nearer or more remote. The proportion of costs to be borne by special assessment vary in different localities. By the method of special assessment a large item of improvement cost is removed from the municipal debt burden. Its employment has met with such general success when broadly applied that some authorities believe that in this rather than in the method of excess condemnation lies the most feasible and least objectionable means of recompensing the city for expenditures conferring special benefits.

LEGISLATION.

Though for many years certain powers appropriate to a city planning commission have been conferred upon various existing municipal authorities it is only within a few years that city planning under the distinctive name has found a place in legislation. Legislation creating or permitting the creation of planning commissions dates from 1907 when Connecticut created such a body for Hartford. Since that date similar laws have been enacted in Maryland, New Jersey, Pennsylvania, California, Massachusetts, Ohio and New York

and in the provinces of Alberta, Ontario, New Brunswick and Nova Scotia. In Nova Scotia for all cities and towns, in Massachusetts for cities and towns over 10,000 population and in Pennsylvania for third-class cities the laws are mandatory, but in the others they are permissive. In addition to these cities framing their own charters, they may create city planning boards whenever they see fit. Cleveland and Dayton have done so. Still other cities have created such commissions by ordinance without express statutory authority. A review of the acts shows that the commissions are sometimes wholly or in part ex-officio, but usually are composed of private citizens. The members usually serve without pay, but may employ a paid secretary or an expert or both. Though in Cleveland the commission has mandatory powers these bodies usually must be consulted upon measures proposed in the field of city planning but their powers are only advisory. The Massachusetts law specifically includes within the scope of the commission's action matters relative to housing. The Pennsylvania law gives the commission advisory powers with respect to streets, buildings, railroads, and bridges, but its definite approval is required for the purchase of lands for parks and play grounds. Though not as yet conferred upon these commissions there are certain new powers which have been conferred upon city authorities which owe their origin or their chief interest to their connection with the city-planning movement. Two of these, "excess condemnation" and "zoning," have been discussed above. To these may be added a series of enactments permitting city authorities for planning purposes to exercise authority beyond the city limits. In the earlier laws the limit was set at one and a half, three or five miles, but of late it has been seen that an arbitrary limit may prove too narrow. In the Canadian provinces and in New York and California these powers are extended to all places "in proximity to" or "in the neighborhood of" the city leaving the precise application to be determined by some administra-

tive office or by the commission. The legislation having for its object to facilitate the carrying out of city plans has been considered above under the caption "financing city planning" and calls for no further mention here.

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This list contains only a few of the more comprehensive works. A much more complete list will be furnished upon application to the Bureau of Legislative Information, State House, Indianapolis.



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